WHAT IS CLAIMED IS:

1. A multi-window display apparatus for combining windows corresponding to a plurality of input image data to present a multi-window display thereof,

5   comprising:

identifying means for identifying a character information area in one window of the windows;

contour area extracting means for extracting a contour area of said identified character information

10 area; and

display changing means for changing a display mode of the character information area in said extracted contour area when said one window is displayed in a scale-down state equal to or less than a predetermined

15 size as one of window elements of said multi-window display.

2. A multi-window display apparatus according to Claim 1, comprising layout changing means for changing

20 a layout of a data telecast window as said window when said plurality of image data is supplied from a plurality of picture sources including a data telecast,

wherein said display changing means changes said display mode in accordance with a change of said

25 layout.

3. A multi-window display apparatus according to

Claim 1, wherein said predetermined size is such a size that a character size in said character information area is equal to or less than a predetermined character size.

4. A multi-window display apparatus according to Claim 2, wherein the multi-window display apparatus is applied to a data telecast receiving apparatus having a remote controller for controlling said data telecast.

5. A multi-window display apparatus according to Claim 1, wherein said display changing means provides no display of character information in said contour area.

6. A multi-window display apparatus according to Claim 1, wherein said display changing means changes said contour area to focus display of a color frame.

7. A multi-window display apparatus according to Claim 4, wherein when said display changing means changes said contour area to focus display of a color frame, said display changing means sets the focus display of the color frame to a same color as a color button provided in said remote controller.

8. A multi-window display apparatus according to

Claim 4, wherein said display changing means scales the character information area in said contour area up to a predetermined character size permitting discrimination of character information, in response to an operation

5   of said remote controller, and displays said character information area in the predetermined character size.

9.   A multi-window display apparatus according to Claim 8, wherein when a control element designated in

10   said data telecast is included in said character information area in said contour area displayed in the scale-up state, said control element can be controlled by said remote controller.

15   10.   A multi-window display apparatus according to Claim 1, wherein said identifying means identifies said character information area while separating said character information area into a text element consisting of text information and a control element

20   consisting of a menu button,
     wherein said contour area extracting means separately extracts said contour areas for the respective elements, and
     wherein said display changing means changes

25   display modes of the contour areas for the respective elements.

11.   A multi-window display apparatus according to Claim 10, wherein said display changing means changes the contour area for each said element to focus display of a color frame.

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12.   A multi-window display apparatus according to Claim 10, wherein the multi-window display apparatus is applied to a data telecast receiving apparatus having a remote controller for controlling a data telecast,

10   wherein when said display changing means changes the contour area for each said element to focus display of a color frame, said display changing means sets the focus display of said color frame to a same color as a color button provided in said remote controller.

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13.   A multi-window display apparatus according to Claim 10, wherein the multi-window display apparatus is applied to a data telecast receiving apparatus having a remote controller for controlling a data telecast,

20   wherein said display changing means scales the character information area in the contour area for each said element up to a predetermined character size permitting discrimination of said character information, in response to an operation of said remote

25   controller, and displays the character information area in the predetermined character size.

14.   A multi-window display apparatus according to
Claim 13, wherein when the control element designated
in said data telecast is included in the character
information area in said contour area displayed in the
5   scale-up state for each said element, said control
element can be controlled by said remote controller.

15.   A multi-window display apparatus according to
Claim 10, wherein said display changing means displays
10   a character string or an icon by which the contents of
the element can be visually discriminated, over the
character information area in the contour area for each
said element.

15   16.   A multi-window display apparatus according to
Claim 8, wherein said display changing means performs
alpha blending of the character information area in
said contour area and a multi-window display area to
present alpha-blended display.

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17.   A multi-window display apparatus according to
Claim 8 or 13, wherein when said character information
area is displayed in the scale-up state, said display
changing means effects stepwise scale-up transition of
25   said character information area within a predetermined
time.

18. A multi-window display apparatus according to Claim 10, wherein the multi-window display apparatus is applied to a data telecast receiving apparatus having a remote controller for controlling a data telecast,

5   wherein said identifying means identifies said character information area while separating said character information area into a plurality of areas for the respective elements and for each identical element, and

10   wherein said display changing means changes the display mode by switching among contour areas of the plurality of separate character information areas for each said identical element, in response to an operation of the remote controller.

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19. A data telecast receiving apparatus for accepting input of a plurality of image data from a plurality of picture sources including a data telecast, and combining windows corresponding to said image data

20   to present multi-window display thereof, comprising:

identifying means for identifying a character information area in a data telecast window;

contour area extracting means for extracting a contour area of the character information area thus

25   identified; and

display changing means for changing a display mode of the character information area in said extracted

contour area when said data telecast window is
displayed in a scale-down state equal to or less than a
predetermined size as one of window elements of said
multi-window display.

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20.   A multi-window display method of combining
windows corresponding to a plurality of input image
data to present multi-window display thereof,
comprising:

10   a step of identifying a character information area
in a said window;

a step of extracting a contour area of the
character information area thus identified; and

a step of changing a display mode of the character
15   information area in said extracted contour area when
said window is displayed in a scale-down state equal to
or less than a predetermined size as one of window
elements of said multi-window display.

20   21.   A multi-window display method according to
Claim 20, comprising a step of changing a layout of a
data telecast window as said window when said plurality
of image data is supplied from a plurality of picture
sources including a data telecast,

25   wherein in said step of changing the display mode,
said display mode is changed according to a change of
said layout.

22. A multi-window display method according to Claim 20, wherein said predetermined size is such a size that a character size in said character information area is equal to or less than a
5   predetermined character size.

23. A multi-window display method according to Claim 21, which is applied to a data telecast receiving apparatus having a remote controller for controlling
10   said data telecast.

24. A multi-window display method according to Claim 20, wherein in said step of changing the display mode, character information in said contour area is not
15   displayed.

25. A multi-window display method according to Claim 20, wherein in said step of changing the display mode, said contour area is changed to focus display of
20   a color frame.

26. A multi-window display method according to Claim 23, wherein in said step of changing the display mode, when said contour area is changed to focus
25   display of a color frame, the focus display of the color frame is set to a same color as a color button provided in said remote controller.

27.   A multi-window display method according to
Claim 23, wherein in said step of changing the display
mode, the character information area in said contour
area is scaled up to a predetermined character size

5   permitting discrimination of character information, in
response to an operation of said remote controller, and
the character information area is displayed in the
predetermined character size.

10   28.   A multi-window display method according to
Claim 27, wherein when a control element designated in
said data telecast is included in the character
information area in said contour area displayed in the
scale-up state, said control element can be controlled

15   by said remote controller.

29.   A multi-window display method according to
Claim 20, wherein in said step of identifying, said
character information area is identifying while being

20   separated into a text element consisting of text
information and a control element consisting of a menu
button,
        wherein in said step of extracting the contour
area, said contour area is separately extracted for

25   each said element, and
        wherein in said step of changing the display mode,
the display mode of the contour area for each said
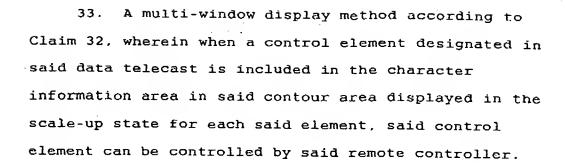
element is changed.

30. A multi-window display method according to
Claim 29, wherein in said step of changing the display
5   mode, the contour area for each said element is changed
to focus display of a color frame.

31. A multi-window display method according to
Claim 29, which is applied to a data telecast receiving
10   apparatus having a remote controller for controlling a
data telecast, wherein in said step of changing the
display mode, when the contour area for each said
element is changed to focus display of a color frame,
the focus display of said color frame is set to a same
15   color as a color button provided in said remote
controller.

32. A multi-window display method according to
Claim 29, which is applied to a data telecast receiving
20   apparatus having a remote controller for controlling a
data telecast, wherein in said step of changing the
display mode, said character information area in the
contour area for each said element is scaled up to a
predetermined character size permitting discrimination
25   of said character information, in response to an
operation of the remote controller, and is displayed in
the predetermined character size.

33. A multi-window display method according to Claim 32, wherein when a control element designated in said data telecast is included in the character information area in said contour area displayed in the scale-up state for each said element, said control element can be controlled by said remote controller.

34. A multi-window display method according to Claim 29, wherein in said step of changing the display mode, a character string or an icon, by which the contents of the element can be visually discriminated, is displayed over the character information area in the contour area for each said element.

35. A multi-window display method according to Claim 27, wherein in said step of changing the display mode, alpha blending of the character information area in said contour area and a multi-window display area is effected to present alpha-blended display.

36. A multi-window display method according to Claim 27 or 32, wherein in said step of changing the display mode, when said character information area is displayed in the scale-up state, stepwise scale-up transition is implemented within a predetermined time.

37. A multi-window display method according to

Claim 29, wherein the method is applied to a data
telecast receiving apparatus having a remote controller
for controlling a data telecast,

wherein in said step of identifying, said
5   character information area is identified while being
separated into a plurality of areas for the respective
elements and for each identical element, and

wherein in said step of changing the display mode,
the display mode is changed by switching among contour
10   areas of the plurality of separate character
information areas for each said identical element in
response to an operation of said remote controller.

38.   A memory storing a program code for
15   implementing the multi-window display method as set
forth in Claim 20.

39.   A program comprising a program code for
implementing the multi-window display method as set
20   forth in Claim 20.